

Notice of Allowability

Application No.

10/521,216

Examiner

Nguyen Tran

Applicant(s)

PETRESCU ET AL.

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/15/02.
2. ☒ The allowed claim(s) is/are 1 and 2.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 3/30/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other 

KARL EASTHOM
SUPERVISORY PATENT EXAMINER

DETAILED ACTION***Allowable Subject Matter***

Claim 1-2 allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1: While prior art such as: Champlin et al. (US 6002238) teaches a (Fig. 1) method for determining the complex impedance $Z(f_m)$ of a non-stationary electrochemical system, characterized in that it comprises the steps of:

(Fig. 2a-2c) setting the system to a selected voltage state and applying a sinusoidal signal of frequency f_m thereto, measuring, immediately after, successive values of the voltage and of the current at regular time intervals ΔT ,

Wiegand et al. (US 6556001) teaches (Fig. 2) (Col. 1, lines 30-45) calculating the discrete Fourier transforms of the voltage ($E(f)$) and of the current ($I(f)$), the voltage transform being calculated for the sole frequency f_m of the sinusoidal signal and the current transform being calculated for frequency f_m and for two adjacent frequencies f_m-1 and f_m+1 on either side of frequency f_m ,

The cited prior art as a whole does not fairly teach or suggest the primarily of step to calculating the impedance in the claimed combination listed below:

and calculating the impedance according to the following formula: $Z(f_m) = E(f_m)/I^*(f_m)$

where I^* designates a corrected current such that:

$$\text{Re}[I^*(f_m)] = \text{Re}[I(f_m)] - \{\text{Re}[I(f_m + 1)] + \text{Re}[I(f_m - 1)]\} / 2$$

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$$\text{Im}[I^*(f_m)] = \text{Im}[I(f_m)] - \{\text{Im}[I(f_m + 1)] \text{Im}[I(f_m - 1)]\} / 2.$$

Regarding claim 2: the method of claim 1, characterized in that it is repeated for a succession of excitation frequencies.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Tran whose telephone number is 571-270-1269. The examiner can normally be reached on M-F 7:30-5:00, OFF every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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